

Exhibit 4 to the Original Complaint.

U.S. Patent No. 8,651,369 v. American Automobile Association, Inc. (AAA)

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1. Claim Chart

Claim	Analysis
[1.P] A method, comprising:	<p>American Automobile Association, Inc. (AAA) (“Company”) performs and induces others to perform a method for enabling a portable electronic device to retrieve and display information by detecting the symbology.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, the Company provides AAA Mobile application with TripTik Planner that induces a user to enable a portable electronic device, including, but not limited to, mobile phone and tablet to retrieve and display information, such as route maps, by detecting a symbology (QR code) from a TripTik booklet.</p>

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AAA Mobile

American Automobile Association, Inc.

4.4★
56.6K reviews

5M+
Downloads

E
Everyone

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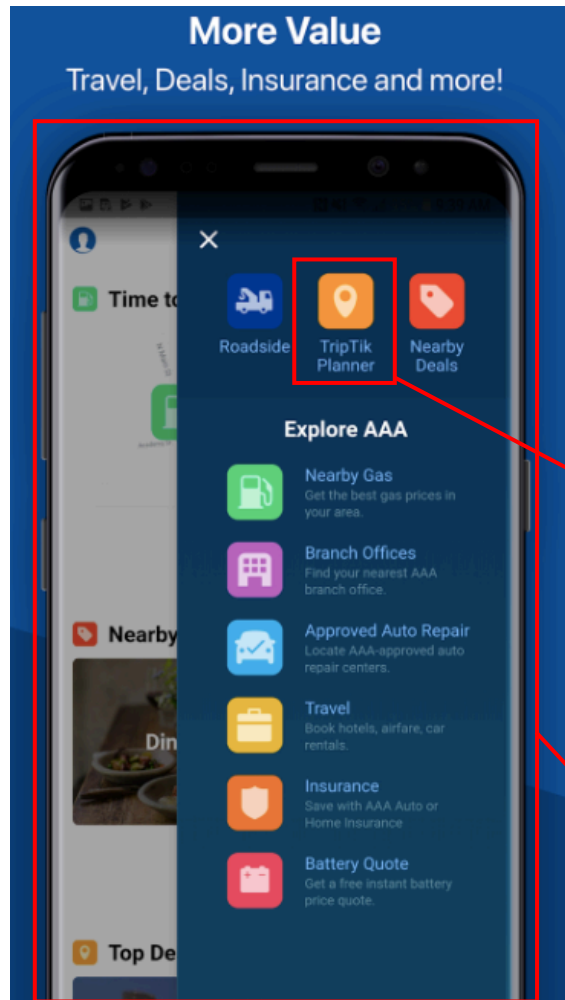
Add to wishlist

You don't have any devices



Source: <https://play.google.com/store/apps/details?id=com.aaa.android.discounts&hl=en&gl=US>

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AAA TripTik Planner in AAA
Mobile application

Portable electronic device

Source:
(Annotated)

<https://play.google.com/store/apps/details?id=com.aaa.android.discounts&hl=en&gl=US>

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Source: <https://triptik.aaa.com/home/>

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AAA TripTik booklet

Source: <https://youtu.be/zwG2AUOrdeM?t=61> (Annotated)

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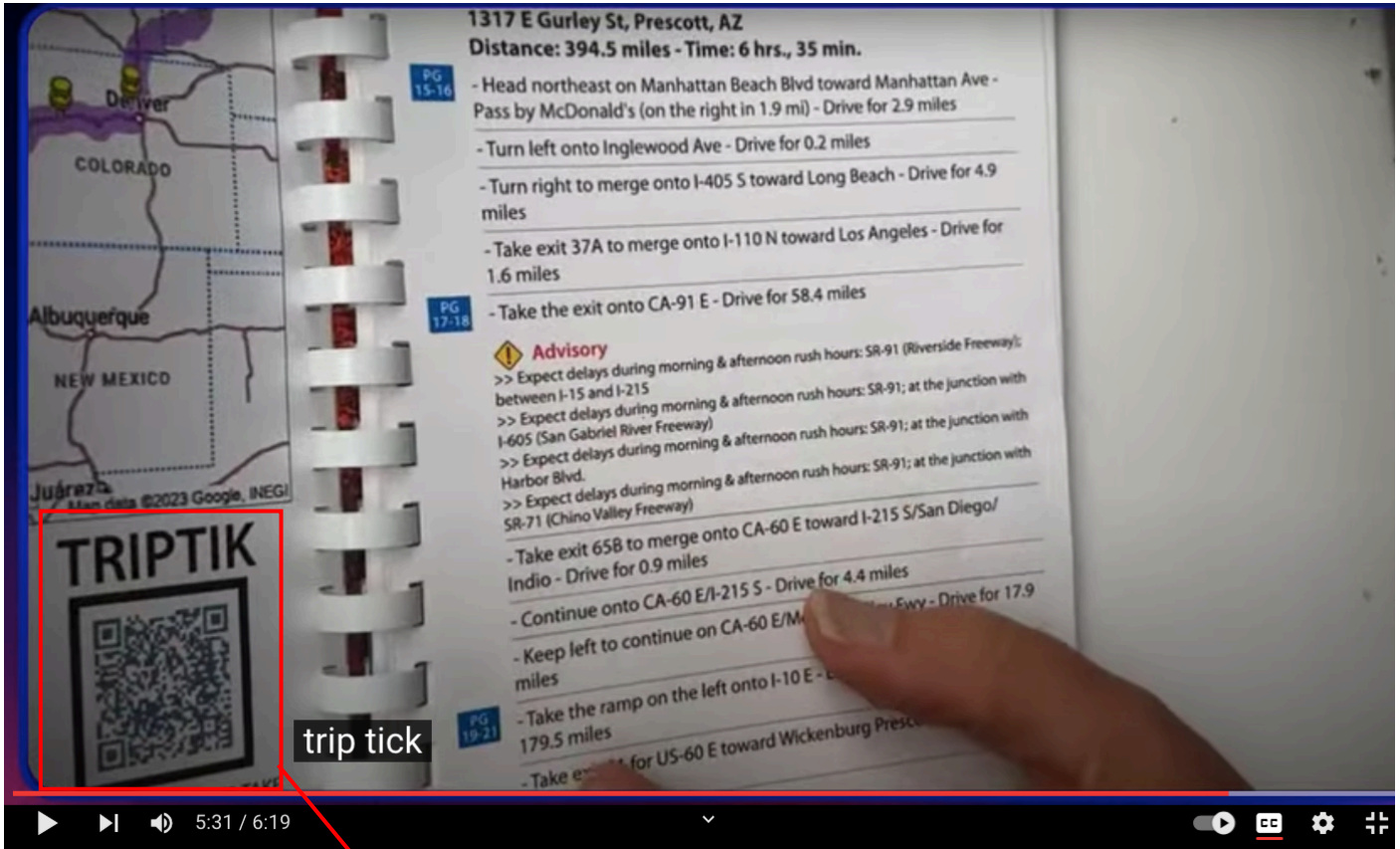
	 <p>1317 E Gurley St, Prescott, AZ Distance: 394.5 miles - Time: 6 hrs., 35 min.</p> <ul style="list-style-type: none"> - Head northeast on Manhattan Beach Blvd toward Manhattan Ave - Pass by McDonald's (on the right in 1.9 mi) - Drive for 2.9 miles - Turn left onto Inglewood Ave - Drive for 0.2 miles - Turn right to merge onto I-405 S toward Long Beach - Drive for 4.9 miles - Take exit 37A to merge onto I-110 N toward Los Angeles - Drive for 1.6 miles - Take the exit onto CA-91 E - Drive for 58.4 miles <p>Advisory</p> <ul style="list-style-type: none"> >> Expect delays during morning & afternoon rush hours: SR-91 (Riverside Freeway); between I-15 and I-215 >> Expect delays during morning & afternoon rush hours: SR-91; at the junction with I-605 (San Gabriel River Freeway) >> Expect delays during morning & afternoon rush hours: SR-91; at the junction with Harbor Blvd. >> Expect delays during morning & afternoon rush hours: SR-91; at the junction with SR-71 (Chino Valley Freeway) <ul style="list-style-type: none"> - Take exit 65B to merge onto CA-60 E toward I-215 S/San Diego/Indio - Drive for 0.9 miles - Continue onto CA-60 E/I-215 S - Drive for 4.4 miles - Keep left to continue on CA-60 E/Mojave Valley Fwy - Drive for 17.9 miles - Take the ramp on the left onto I-10 E - Drive for 179.5 miles - Take exit 10 for US-60 E toward Wickenburg Prescott <p>trip tick</p> <p>QR code image ("digital image")</p> <p>Source: https://www.youtube.com/watch?v=zwG2AUOrdeM (Annotated)</p> <p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Defendant.</p>
[1.1] capturing a digital image using a digital image capturing device	Company performs and induces others to perform the step of capturing a digital image using a digital image capturing device that is part of a portable electronic device.

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that is part of a portable electronic device;

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

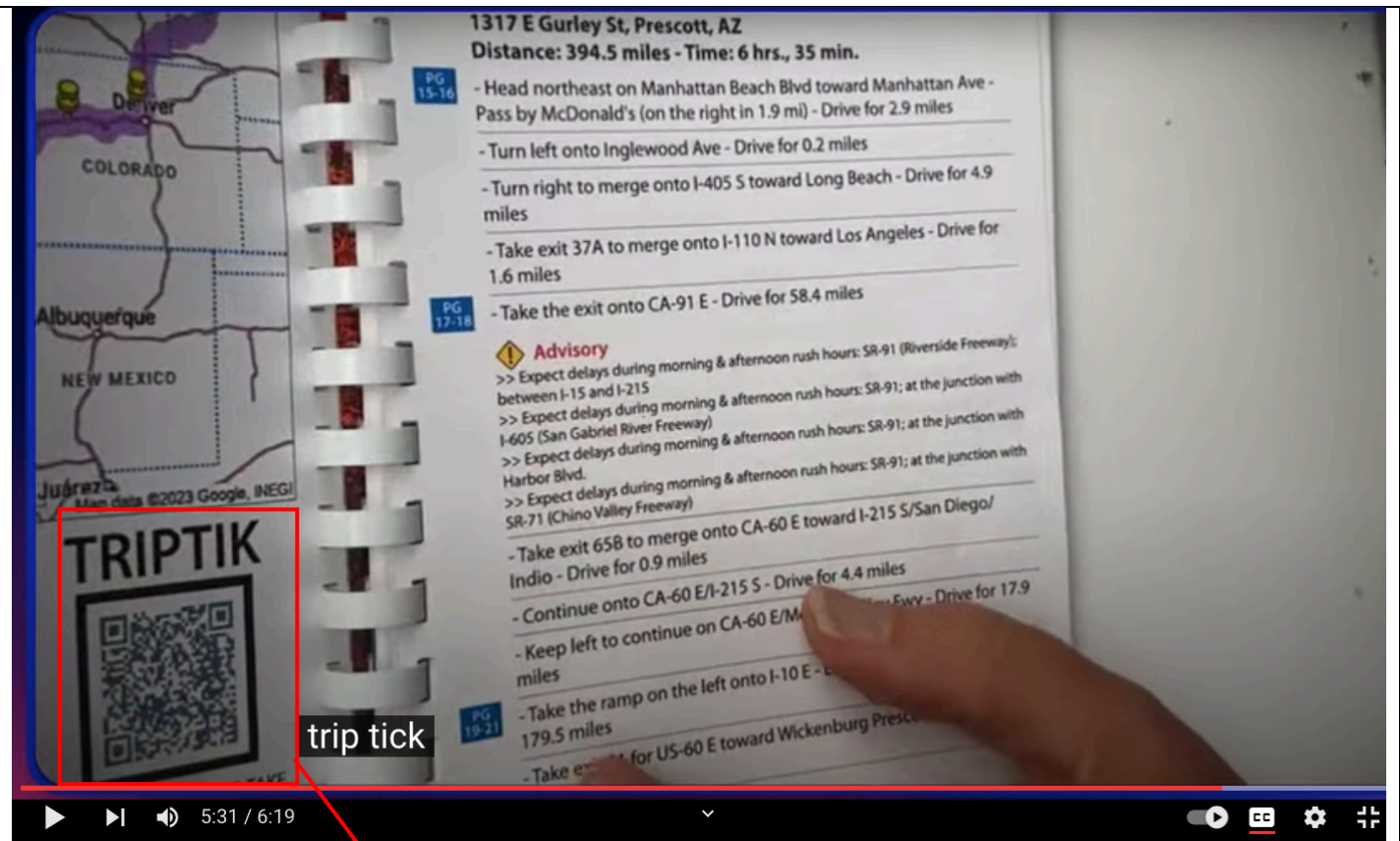
For example, the AAA TripTik booklet provides QR code, such that it would be apparent to a person having ordinary skill in the art that AAA induces the user to capture and scan the QR code image (“digital image”) through a built-in camera (“digital image capturing device”) of the user’s mobile phone (“portable electronic device”) to get route information for navigation.



AAA TripTik booklet

Source: <https://youtu.be/zwG2AUOrdeM?t=61> (Annotated)

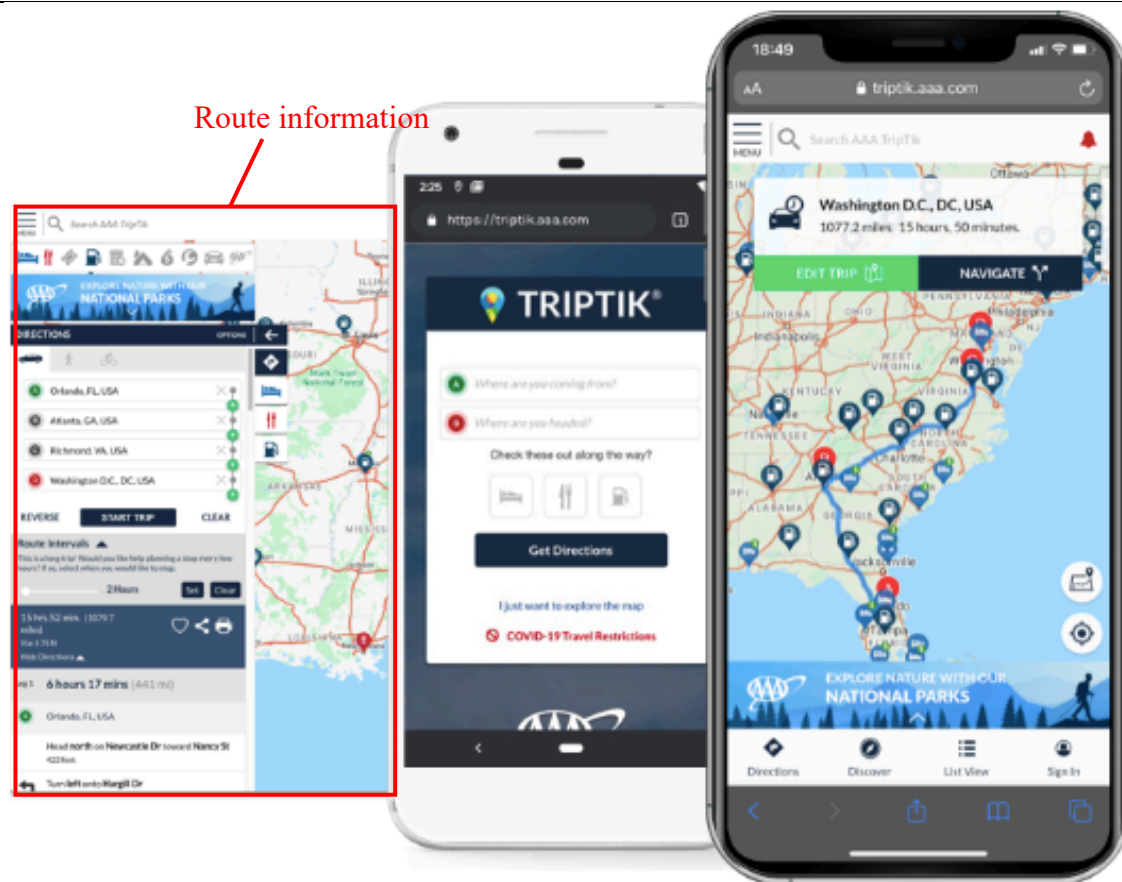
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QR code image ("digital image")
 from TripTik booklet

Source: <https://www.youtube.com/watch?v=zwG2AUOrdeM> (Annotated)

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Source: <https://triptik.aaa.com/home/> (Annotated)

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Defendant.

[1.2] detecting
symbology associated
with the digital image

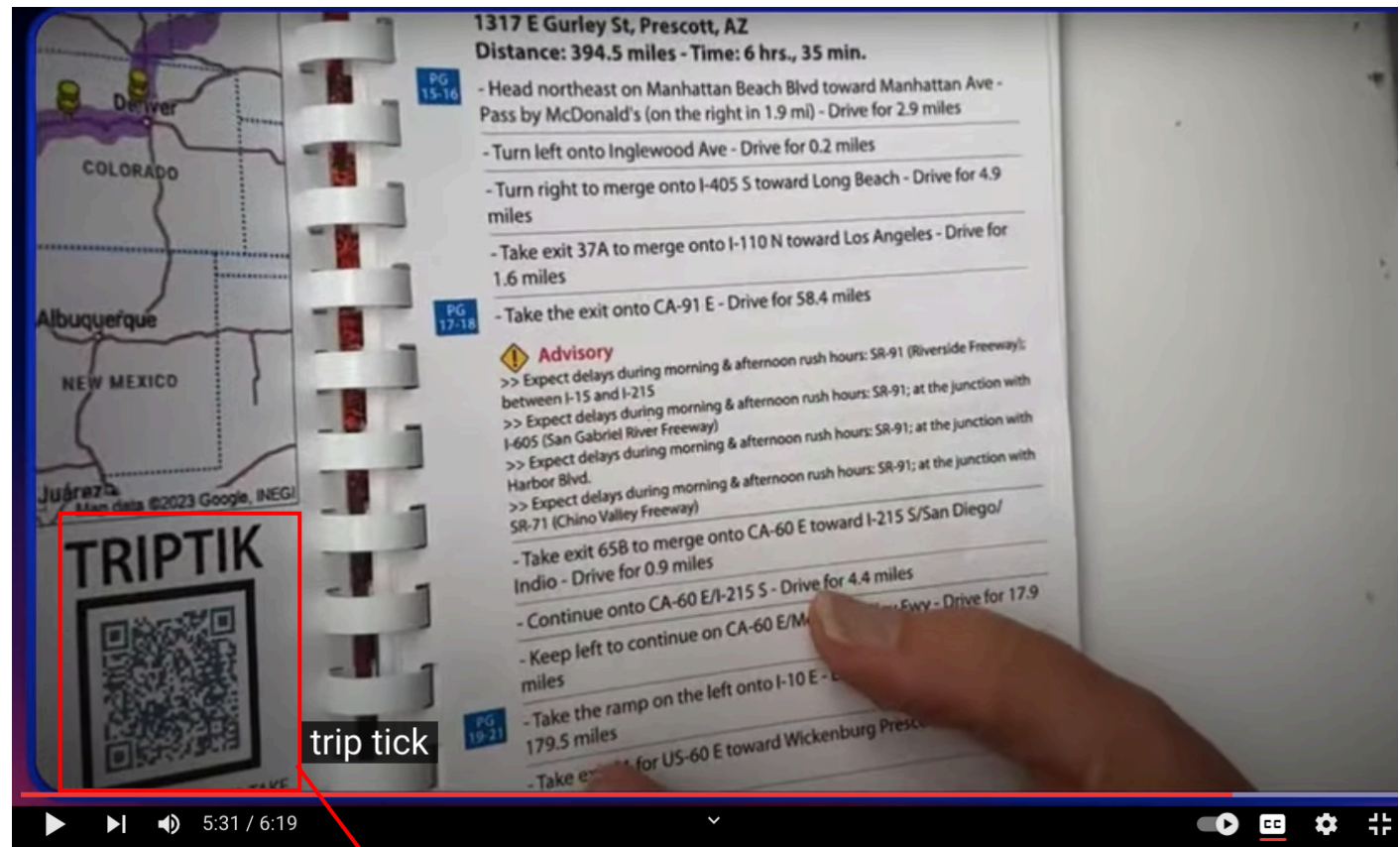
Company performs and induces others to perform the step of detecting symbology associated with the digital image using a portable electronic device.

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using a portable electronic device;

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, the AAA induces the user to use built-in camera of the user's mobile phone ("portable electronic device") to detect and scan the QR code ("symbology") from the QR code image ("digital image") of the AAA TripTik booklet.



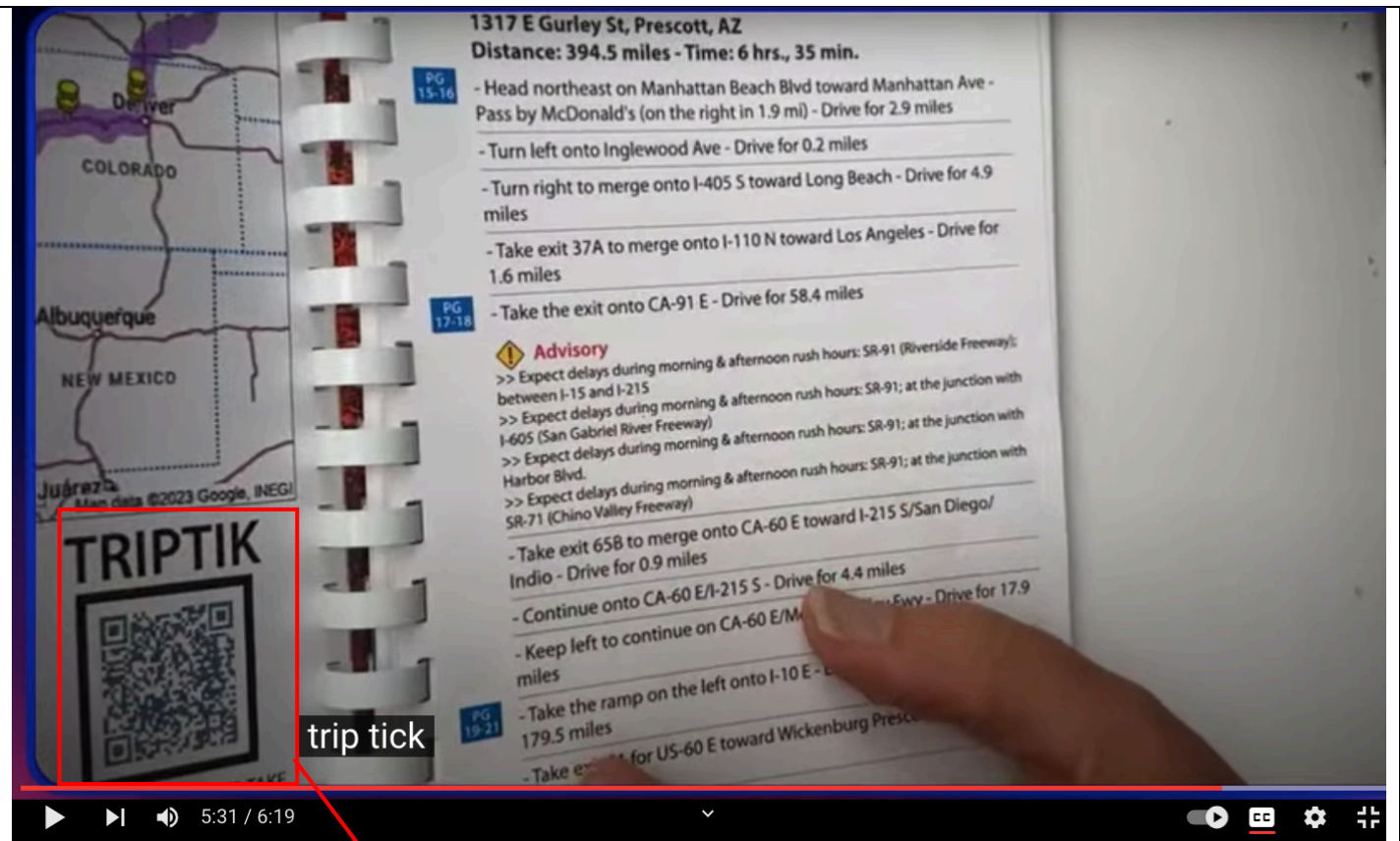
QR code image ("digital image")

Source: <https://www.youtube.com/watch?v=zwG2AUOrdeM> (Annotated)

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	Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Defendant.
[1.3] decoding the symbology to obtain a decode string using one or more visual detection applications residing on the portable electronic device;	<p>Company performs and induces others to perform the step of decoding the symbology to obtain a decode string using one or more visual detection applications residing on the portable electronic device.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, the AAA induces the user to scan the QR code from the TripTik booklet using the built-in camera application (“visual detection applications”) of the mobile phone (“portable electronic device”) and decodes it at the backend, such that the scanning involves interpretation of the black and white patterns of the QR code to extract the embedded data. The extracted data is converted into a machine-readable data which contains a unique identifier (“decode string”). Therefore, it is apparent for a person having ordinary skill in the art that the camera application decodes the QR code to obtain the unique identifier at the backend using the camera application of the mobile phone.</p>

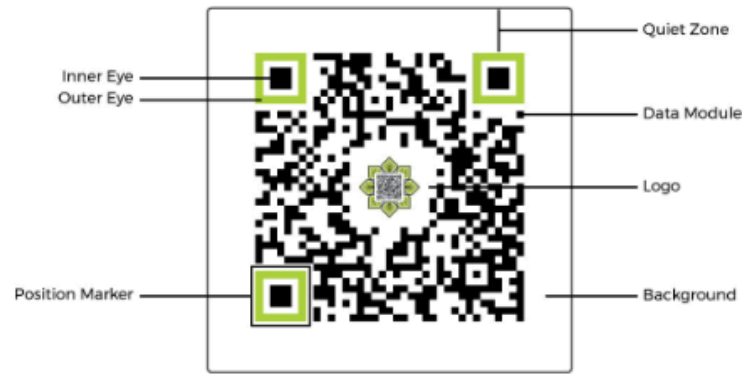
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QR code image ("digital image")

Source: <https://www.youtube.com/watch?v=zwG2AUOrdeM> (Annotated)

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Parts of a QR code

The most important parts of a QR code are:

- **Data module.** This is the standard unit of the QR code. It's typically a black square set against a white background. Though the colors and contrast can be different, black-on-white is the most optimal when creating a custom QR code. The arrangement of these black squares, or data modules, is what makes up the majority of a QR code.

Source:

<https://www.sproutqr.com/blog/how-do-qr-codes-work#:~:text=In%20the%20QR%20code%2C%20the,back%20to%20the%20original%20URL.>

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	<p>In the QR code, the arrangement of the squares—or data modules, as they're called—is actually our URL. It's just been translated from the alphanumeric string of the URL into a collection of squares. That's how you go from <u>link to QR code</u>. A QR code scanner will then translate it <i>back</i> to the original URL.</p> <p>Source: https://www.sproutqr.com/blog/how-do-qr-codes-work#:~:text=In%20the%20QR%20code%2C%20the,back%20to%20the%20original%20URL.</p> <p>QR codes consist of black squares arranged in a grid (matrix) on a white background and are read by specialized software that is able to extract data from the patterns that are present in the matrix. These codes are capable of containing more information than traditional barcodes, and primarily handle four modes of data: alphanumeric, numeric, binary, and Kanji.</p> <p>Source: https://www.investopedia.com/terms/q/quick-response-qr-code.asp</p> <p>Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Defendant.</p>
[1.4] sending the decode string to a remote server for processing;	<p>Company performs and induces others to perform the step of sending the decode string to a remote server for processing.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, upon QR code detection, the AAA Mobile application displays the route information on the user's mobile phone for navigation. It would be apparent to a person having ordinary skill in the art that in the process, the AAA induces the user to decode the QR code into a unique identifier ("decode string") and send it to a remote server for processing.</p>

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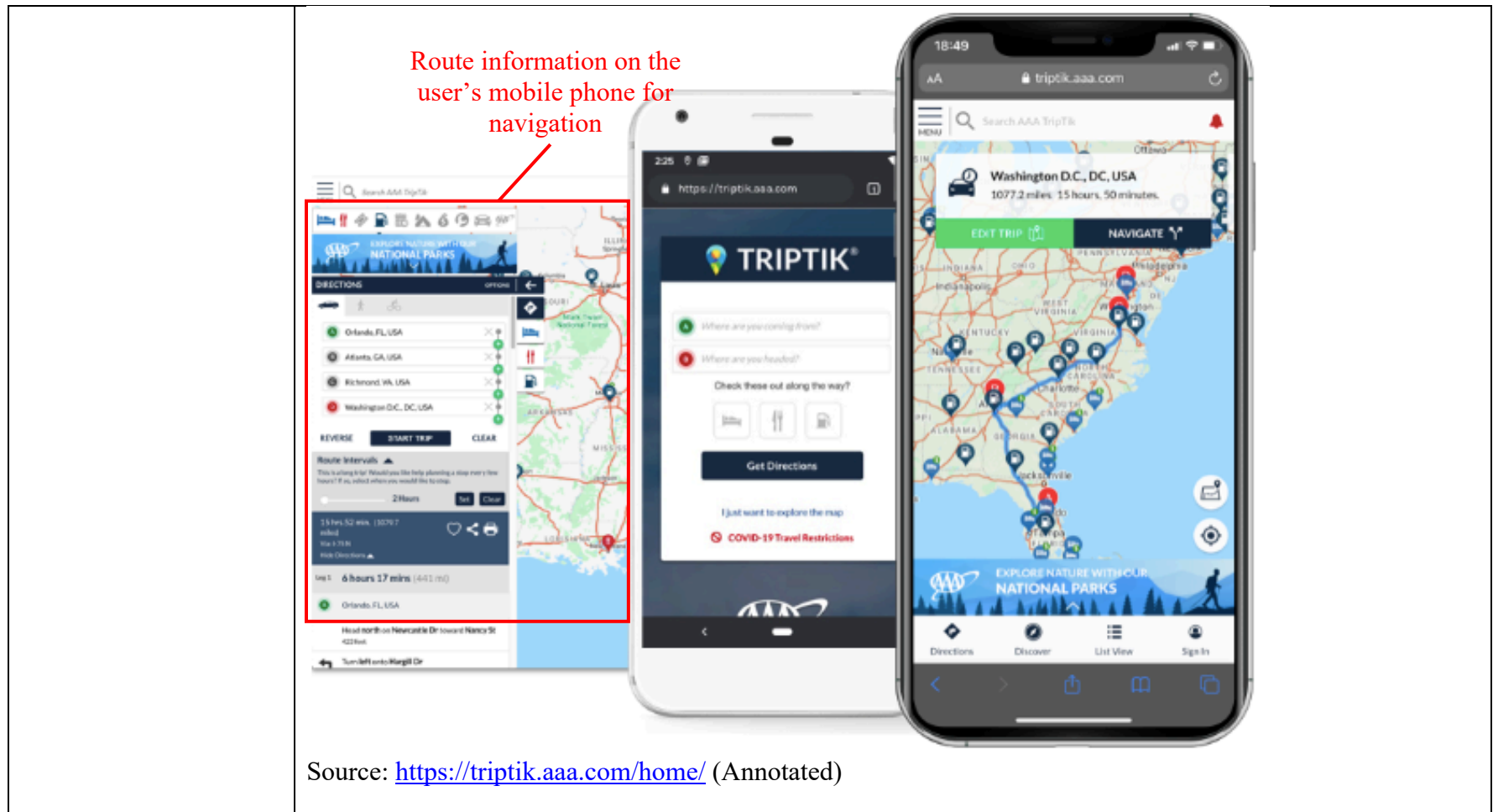
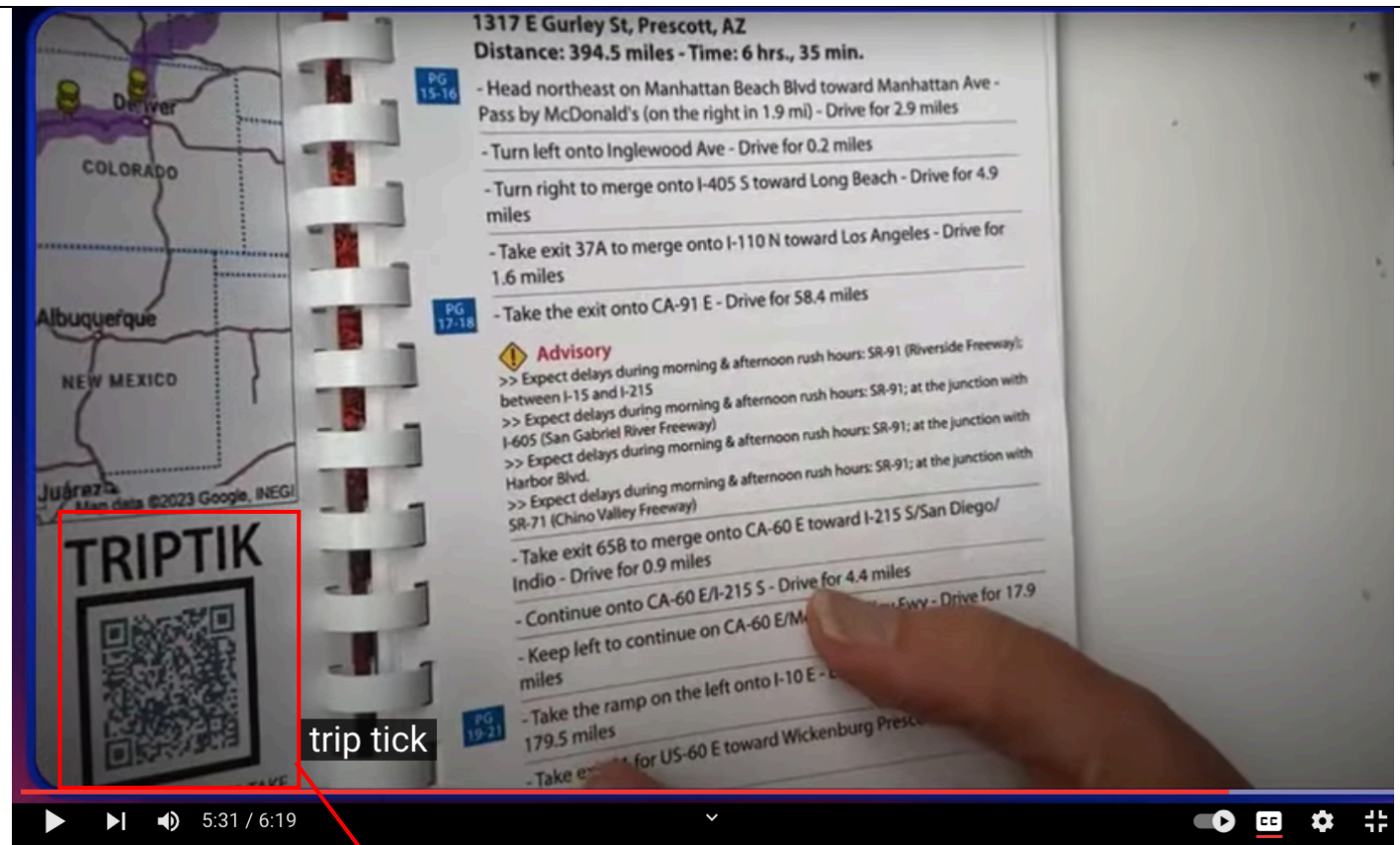


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QR code image ("digital image")

Source: <https://www.youtube.com/watch?v=zwG2AUOrdeM> (Annotated)

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Defendant.

[1.5] receiving information about the digital image from the

Company performs and induces others to perform the step of receiving information about the digital image from the remote server wherein the information is based on the decode string.

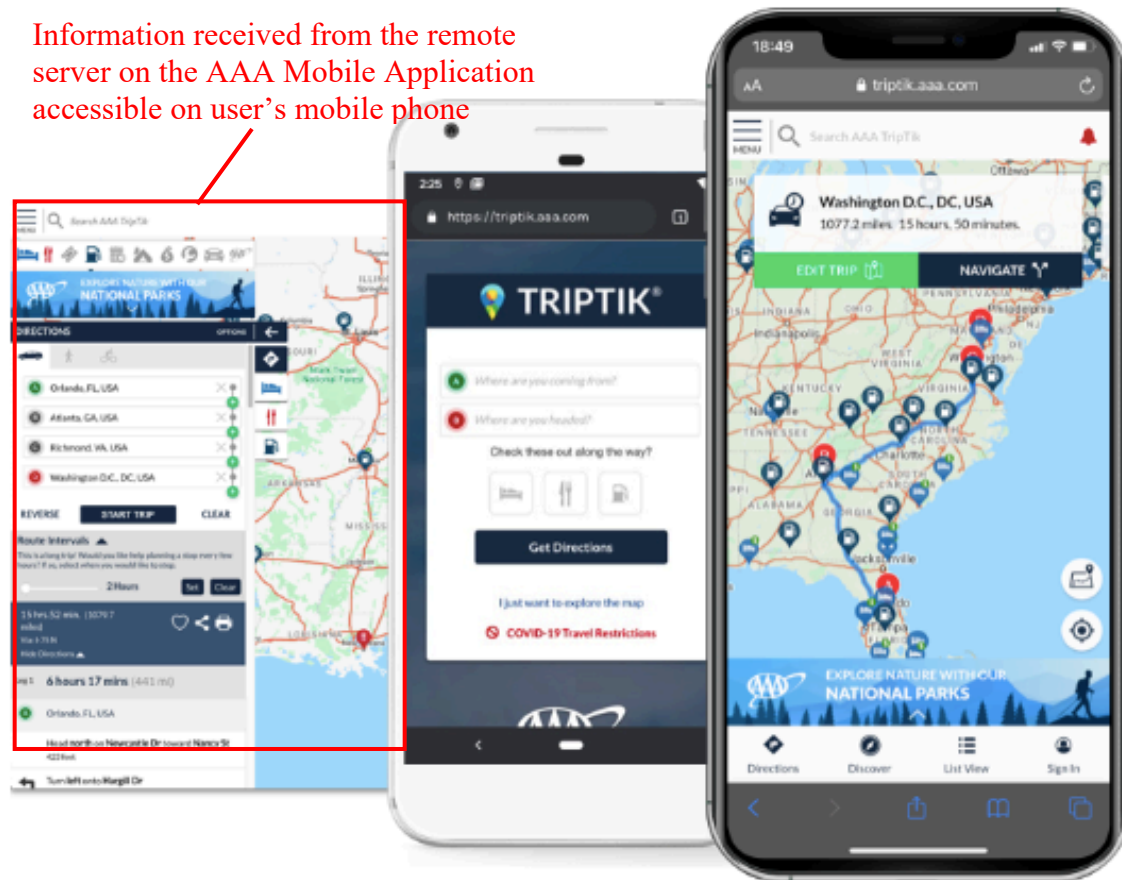
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remote server wherein the information is based on the decode string;

This element is infringed literally, or in the alternative, under the doctrine of equivalents.

For example, the AAA Mobile Application accessible on the user's mobile phone induces the user to receives the maps information from the remote server that is based on the decoded QR code from the TripTik booklet.

Information received from the remote server on the AAA Mobile Application accessible on user's mobile phone

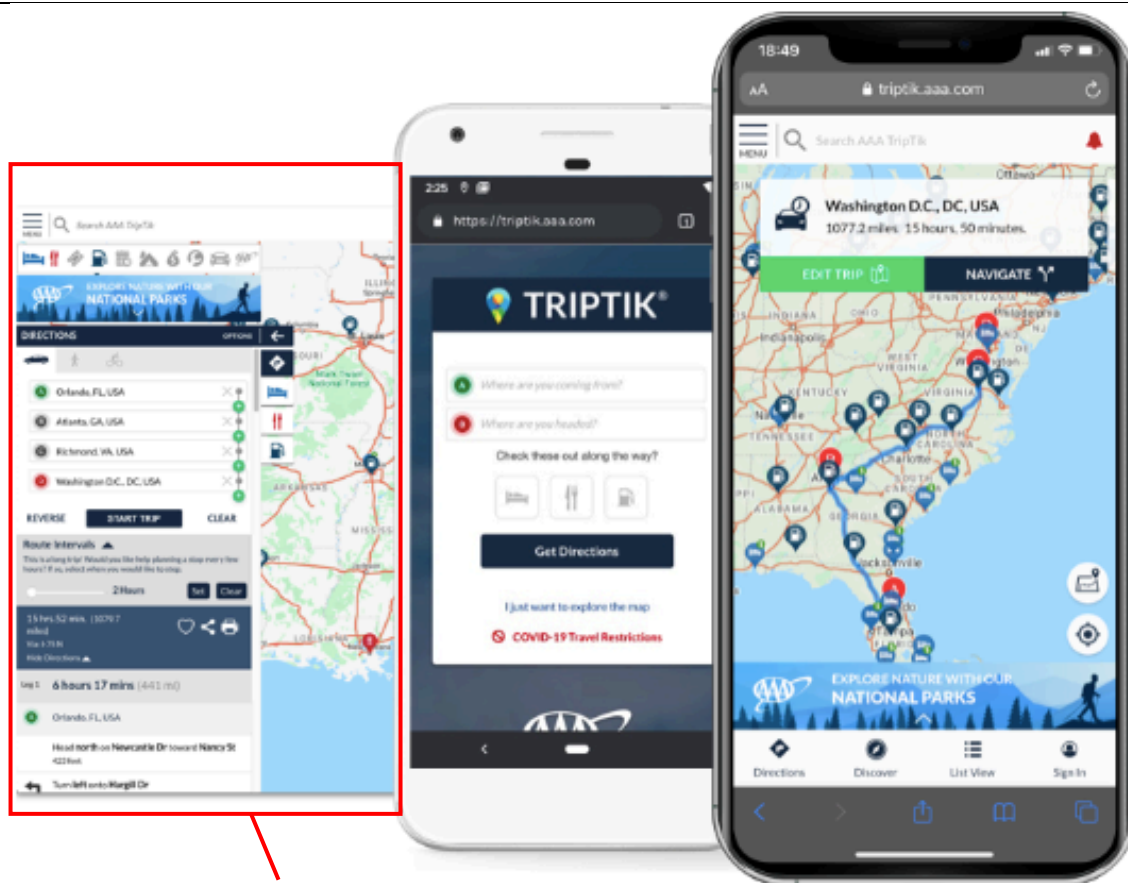


Source: <https://triptik.aaa.com/home/> (Annotated)

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	Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Defendant.
[1.6] displaying the information on a display device associated with the portable electronic device.	<p>Company performs and induces others to perform the step of displaying the information on a display device associated with the portable electronic device.</p> <p>This element is infringed literally, or in the alternative, under the doctrine of equivalents.</p> <p>For example, the AAA induces the user to receive and display the route information on the screen (“display device”) of (“associated with”) the user’s mobile phone (“portable electronic device”).</p>

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Information received from the remote server on the AAA Mobile Application accessible on user's mobile phone

Source: <https://triptik.aaa.com/home/> (Annotated)

Further, to the extent this element is performed at least in part by Defendant's software source code, Plaintiff shall supplement these contentions pursuant to production of such source code by the Defendant.

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2. List of References

1. <https://play.google.com/store/apps/details?id=com.valvesoftware.android.steam.community>, last accessed on December 19, 2023.
2. <https://triptik.aaa.com/home/>, last accessed on December 19, 2023.
3. <https://www.youtube.com/watch?v=zwG2AUOrdeM>, last accessed on December 19, 2023.
4. <https://www.sproutqr.com/blog/how-do-qr-codes-work#:~:text=In%20the%20QR%20code%2C%20the,back%20to%20the%20original%20URL>, last accessed on December 19, 2023.
5. <https://www.investopedia.com/terms/q/quick-response-qr-code.asp>, last accessed on December 19, 2023.